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CAMBODIA, LAOS, THAILAND AND VIET-NAM

Committee for Co-ordination of Investigations of
the Lower Mekong Basin
Sixteenth Session (Plenary)
3 - 8 January 1962
Phnom-Penh, Cambodia

MEKONG PROJECT

SEDIMENTATION SURVEY MISSION

Programme of work for 1962

by

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FRENCH PERMANENT DELEGATION
TO ECAFE

FRENCH EMBASSY

No. 59/E

Bangkok, 30 December 1961

Dear Mr. Executive Agent,

I have the honour to forward to you, for the Sixteenth Session of the Mekong Committee, whose agenda includes the Tonle Sap Project, a report on the French Sedimentation Survey Mission.

The Mission started in October 1960 has effected so far a reconnaissance survey over a period of three months, from 15 October 1960 to 15 Janaury 1961.

During this mission, a field reconnaissance made it possible to delineate a preliminary programme of work for the estimatation of the rate of silting in the Great Lake, and to collect the basic data necessary to evaluate the present importance of sedimentation in that area.

A report submitted in February 1961 to the approval of the Mekong Committee and transmitted through you to all parties concerned included all data collected to date and indicated the main lines of further work to be done. This work includes two parts:

A. A first part, requiring collection of basic data on liquid discharges. This involves the following operations:

(1) To measure the discharge of the main tributaries of the Great Lake, in order to produce at least an approximate rating curve of those tributaries.

(2) To produce an approximate estimation of the complementary run-off discharge into the Great Lake and to determine whether such discharge is negligible or not.

(3) To collect and interpret all available.

/The survey work

Dr. C. Hart Schaaf
Executive Agent
Committee for Coordination of Investigations of the Lower Mekong Basin
ECAFE, Sala Santitham
Bangkok.

The survey work included in this first part should be conducted in close cooperation with the Cambodian hydrologists in charge of Great Lake surveys, in order to avoid any duplication and produce optimum results.

B. A second part, for which Mr. Dussart, Chief of the French Sedimentation Survey Mission on the Great Lake has drafted the programme of work which I am sending you herewith. It is understood that the French sedimentation survey Mission will work in close liaison and cooperation with the Indian Mission for the Tonle Sap Project, as well as with the other programmes participating in the preparation of the Tonle Sap Project.

I should be very grateful if you could forward this to the Committee members.

Yours sincerely,

(signed)

J.D. Paolini
Permanent representative of France
to E.C.A.F.E.

PROGRAMME OF WORK OF THE SEDIMENTATION SURVEY MISSION FOR 1962

The impending arrival in Cambodia (most probably on 15 January 1962) of Mr. J.P. Carbonnel, research agent of the French National Center for Scientific Research, appointed as Assistant to the Chief of the Sedimentation Survey Mission, enables us to envisage the implementation of the following programme in the near future:

1. Continuation of the 1960 reconnaissance survey:

(a) Collection of all currently available data on solid discharge of the Tonle Sap and of the principla stungs of the Great Lake already surveyed by other agencies (USOM, Harza, tec...), and study of solid discharges of other important tributaries of the Lake.

(b) Collection of all meteorological data, in order to evaluate the nature and importance of rainfall, erosion and sedimentation transport factors in the watersheds of the Great Lake tributaries.

(c) Analysis of physical properties, and possibly of chemical properties, of soils subject to erosion or sedimentation in the Great Lake area.

(d) Study of relationship between meteorological factors (winds, rains), the varying water level of the Great Lake, sedimentation transport capacity of tributaries and sedimentation.

2. Consideration of new problems, with a view to producting a general report in the near future:

(a) Study of sedimentation rate at different locations on the Great Lake and on the Tonle Sap, in particular on the Tonle Sap near the Snoc Trou Bar, in the Small Lake and in the Great Lake an also in the vicinity of the confluence of the main Great Lake tributaries.

(b) Study of the distribution of the various sedimentation strata in the whole basin area.

(c) Study of the action of currents in the tributaries and Lake on the distribution of such strata and on silting at various locations on the Great Lake.

/(d) Study of

(d) Study of silting rate in the Great Lake, and evaluation of the duration of survival of the Lake in the light of all the above data.

In order to implement that programme, the Sedimentation Survey Mission will have to contact anew all agencies currently collecting basic data, and continue the organization of the sedimentation laboratory which we had started to install during the preceding mission.

Furthermore, the close relationship between the sedimentation survey mission and the fisheries mission enables us to consider the study of correlation between the sedimentation rate in the Great Lake and the fish life in that area.

Suggestions for the programme of work for 1962 are as follows:

1. Every three months, in low-water, flood, high-water and decreasing flood periods, study of the solid discharge of tributaries, insofar as it is possible to estimate such solid discharges on the basis of simultaneous or previous analyses of liquid discharges.

2. Study of currents in the Great Lake in the winter monsoon, summer monsoon and trade-winds season.

3. In the low-water season, general study, through collection of samples, core drilling and field observations, of the nature and intensity of sedimentation, and survey of soils in the Great Lake area, in particular in the permanently submerged zone (Great Lake, Small Lake).

4. Analysis, in the sedimentation laboratory currently under organization, of samples collected, and preparation of a comprehensive report.

In order to carry out field observations, the sedimentation survey mission will need to have the necessary means of transport, in particular for the transport of sampling equipment, which is often quite heavy, and of bulky current measurement equipment.

The results should make it possible to evaluate the silting rate of the lake in present conditions.

/In the case

In the case of regulation of the water level in the Great Lake by means of a barrage on the Tonle Sap, such studies will also make it possible to evaluate the effect of the establishment of a limit-level of the water in the Great Lake, below which lateral sediment transport through direct action of the wind becomes important and determines the distribution of sediments brought in by the Great Lake tributaries (including the Tonle Sap).

The Mission will study a complete hydrologic cycle of the Tonle Sap, from low-water season to low-water season, and will endeavour to define the laws of sedimentation active in the area, as well as the correlation between:

Meteorological factors (rainfall, winds)
Hydrological factors (currents, in- and out-flowing discharges), and
Geodynamic factors (sediment transport, erosion, nature of materials transported and deposits)

Considering the importance of the contempleted investigations, it would be necessary to obtain from the local authorities all the physical assistance which the French Mission might not be able to provide, such as technical personnel for laboratory and field work, boats, etc...

Thonon, 22 December 1961

B. Dussart